

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An adapter that comprises:
a lane receiver configured to receive a differential signal on a differential pair of conductors, and configured to convert the differential signal into a sequence of code symbols;
a decoder configured to decode the sequence of code symbols to produce a sequence of received symbols; and
a circuit configured to determine if the sequence of received symbols is incorrect due to inversion of the differential signal, wherein the lane receiver is configured to correct for inversion of the differential signal if the circuit determines inversion exists.
2. (Original) The adapter of claim 1, wherein the decoder decodes code symbols from a running-disparity code having a positive running disparity symbol and a negative running disparity symbol for each input symbol.
3. (Original) The adapter of claim 2, wherein the circuit is configured to examine a decoded training sequence having a start symbol and a training symbol to determine if inversion exists.
4. (Original) The adapter of claim 3, wherein the start symbol has ^{the} a positive running disparity symbol that is the inverse of the negative running disparity symbol for the start symbol.
5. (Original) The adapter of claim 3, wherein the inverse of the positive running disparity symbol for the training symbol decodes to a symbol different

than the training symbol, and wherein the inverse of the negative running disparity symbol decodes to a symbol different than the training symbol.

6. (Original) The adapter of claim 5, wherein the circuit locates the start symbol, identifies the training symbol relative to the start symbol, determines if the training symbol has an incorrect value corresponding to the inverse of the positive or negative running disparity symbol for the training symbol.

7. (Original) The adapter of claim 6, wherein the circuit toggles correction of differential signal inversion if the training symbol has an incorrect value corresponding to the inverse of the positive or negative running disparity symbol for the training symbol.

8. (Currently Amended) The adapter of claim 1, wherein the decoder is ^{an} 8B/10B/8B code decoder.

9. (Original) The adapter of claim 1, further comprising:
a second lane receiver configured to receive a second differential signal on a second differential pair of conductors, and configured to convert the second differential signal into a second sequence of code symbols; and
a second decoder configured to decode the second sequence of code symbols to produce a second sequence of received symbols,
wherein the circuit is further configured to determine if the second sequence of received symbols is incorrect due to inversion of the second differential signal, wherein the second lane receiver is configured to correct for inversion of the second differential signal if the circuit determines inversion exists.

10. (Original) The adapter of claim 9, wherein the circuit is configured to combine the sequences of ^{the first and second} received symbols to produce an output symbol stream.

11. (Currently Amended) A method of correcting for differential signal inversion, wherein the method comprises:

converting a differential signal into a sequence of code symbols;
decoding the sequence of code symbols to form a sequence of received symbols; and
determining if the sequence of received symbols is incorrect due to inversion of the differential signal; and
inverting the sequence of code symbols if inversion is determined.

12. (Canceled).

13. (Original) The method of claim 11, wherein the code symbols are determined according to a running disparity code having a positive running disparity symbol and a negative running disparity symbol corresponding to each input symbol.

14. (Original) The method of claim 13, ~~and~~ wherein the determining includes:
identifying a training symbol sequence in the sequence of received symbols, said training symbol sequence having a start symbol and a training symbol.

15. (Currently Amended) The method of claim 14, wherein the start symbol has ^{the} a positive running disparity code symbol that is the inverse of the negative running disparity code symbol for the start symbol, and wherein the inverse of the positive and negative running disparity symbols for the training symbol decodes to one or more incorrect symbols different from the training symbol.

16. (Original) The method of claim 15, wherein the determining further includes:

determining if the training symbol has been decoded as one of said incorrect symbols.

17. (Original) The method of claim 13, wherein said running disparity code is an ~~8B/10B~~ code.

10B/8B

18. (Original) The method of claim 11, further comprising:
converting a second differential signal into a second sequence of code symbols;
decoding the second sequence of code symbols to form a second sequence of received symbols; and
determining if the second sequence of received symbols is incorrect due to inversion of the second differential signal.

19. (Original) The method of claim 18, further comprising:
inverting sequences of ^{*the first and second*} code symbols for which the ^{*the first and second*} sequence of received symbols ^{*are*} is determined incorrect due to inversion; and
combining the sequences of ^{*the first and second*} received ^{*symbols*} signals to form a single output symbol stream.